

527

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b> 23658
<b>Description:</b> Tube Assembly		<b>Part Number:</b> D3304-043
<b>Dwg:</b> D3304 Rev. A+B 05/08/12 kg		<b>Qty:</b> 2
		Page 1 of 1

Step	Location	Procedure	By	Date	Qty
1	DC	Issue Traveler	SB	05/08/12	2
2	MC	Cut blank: 22.00" as per Dwg D3304 Material: AISI 304/316 SS tubing 0.875" x 0.065" wall (M304TR0.875W.065) <b>Identify for D3304-3</b> Batch: M16054	P	05/08/12	2
3	MC	Turn as per Folio FA458 and Dwg D3304 <b>Identify as D3304-3</b>	P	05/08/12	2
4	QC2	Inspect parts as they come off the CNC machine	P	05/08/12	2
5	QC8	Second check	mc	05/08/12	2
6	MC	Deburr	P	05/08/12	2
7	GA	Form as per Dwg D3304 <b>Ensure that bend radius does not fall into straight section using DT8756.</b>	AB	06/04/10	2
8	GA	Drill as per Dwg D3304 using drill Jig D3304-T1	AB	06/04/10	2
9	GA	Cut tube to length as per Dwg D3304	AB	06/04/10	2
10A	GA	Deburr	SB	06/04/11	2
10B	QC5	INSPECT WORK TO STEP 10A	SB	06/04/11	2
11	WS	Weld bracket as per Dwg D3304 and QSI 004 using DT8756 <b>Pick:</b> Qty Part Number Description Batch 1 D3304-3 Bracket B25067	AA	06/04/13	2
12	QC9	Inspect weld	PD	06/04/13	2
13	FP	Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3	DL	06/04/15	2
14	QC3	Inspect Powder Coat	SB	06/04/17	2
15	GA	Assemble lanyard and pip pin as per Dwg D3304 <b>Pick:</b> Qty Part Number Description Batch 1 BLBS-0016 Pip Pin M16557 2 CBL-460 Loop Sleeve M19476 12.5" CBL-1240 Cable M16713	FF	06/04/17	2
16	QC5	Inspect work to Step 15	Z	06/04/19	2
17	ST	Identify parts with batch number and part number using a fine point permanent marker as per Dwg D3304 and Stock	06/04/19	(2)	
18	AC	Cost / part: _____	06/04/19	2	
19	DC	Close W/O Inspect Level 21	06/04/20	2	

Rev	Date	Change	Revised By	Approved
A	04.09.08	New issue	KJ/JLM	
B	04.09.28	BLBS-0016 changed from BLRS-001	KJ/JLM	
C	04.11.17	Revised Step 15	KJ/JLM	
D	04.11.26	Revised Steps 7	KJ/JLM	

RELEASED

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA:  Date: 06/04/00

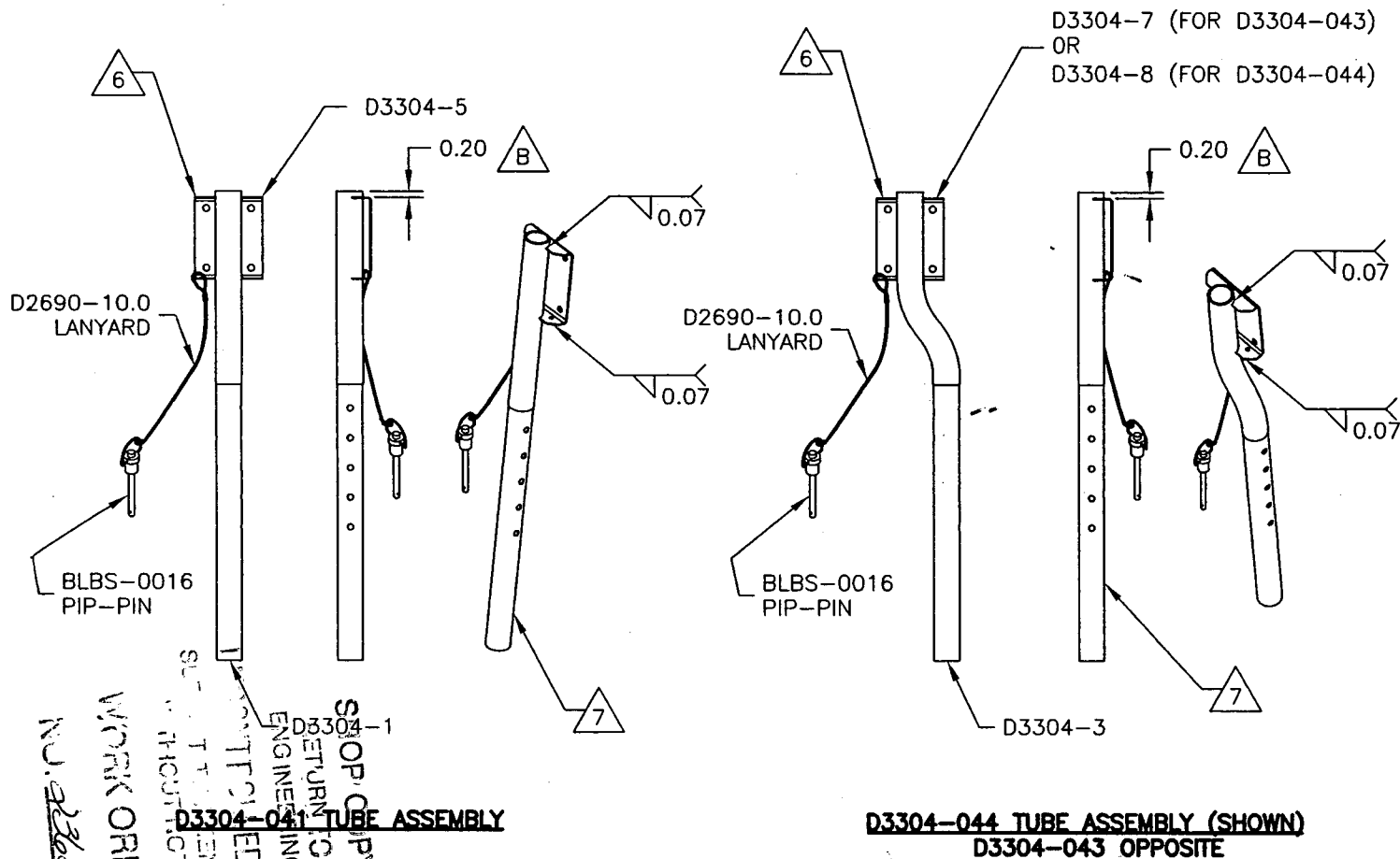
NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_



**DART**

DESIGN	RF	DRAWN BY	RF	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA	REV. B
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	DRAWING NO. D3304	SHEET 1 OF 4
DATE	05.07.15	TITLE	TUBE ASSEMBLY	SCALE	1:6
A	04.08.18	NEW ISSUE			
B	05.07.15	UPDATE DIMENSIONS: ADD D3304-7/-8			



**D3304-041/-043/-044 NOTES:**

- 1) FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

**RELEASED**  
11-05-08-11

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Jun 23, 2005  
11:40 am

Work Order No : 0023658  
Project Name : D3304-043  
Project For : WK527  
Work Order Type : Main  
Main WO Number :  
House Part Number : D3304-043  
Description : Tube Assembly  
Manufactured : Yes  
Amount Req'd : 2  
Amount Done : 0  
Start Date : 06-23-05  
Est Finish Date : 07-15-05  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Mark Up : 0.000%  
Actual Mark Up : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	0.00	0.00		
Production Cost :	0.00	0.00	0.00	0.00	0.00
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	0.00	0.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	0.00	0.00		
Mark up :	0.000	0.000			
Selling Cost :	0.00	0.00			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	0.00

# Job Costing Report

Dart Aerospace Ltd.  
Hawkesbury

Nov 08, 2005  
10:33 am

Work Order No : 0023658  
Project Name : D3304-043  
Project For : WK527  
Work Order Type : Main  
Main WO Number :  
House Part Number : D3304-043  
Description : Tube Assembly  
Manufactured : Yes  
Amount Req'd : 2  
Amount Done : 0  
Start Date : 06-23-05  
Est Finish Date : 07-15-05  
Act Finish Date :  
Drawings Req'd : No  
Ok for Approval :  
Approval Rec'd :

Department Code:  
Burden Flags : NNNNNNNN  
WO Status : Open  
Invoice State : Not Invoiced  
Invoice Date :  
Invoice Number :  
Invoice Amount : 0.00  
Order Entry No :  
OE Value : 0.00  
Est Margin : 0.000%  
Actual Margin : 0.000%  
\$0 Posted to Finished Goods

	Estimated	Actual	Var. %	Posted	To Post
Material Cost :	0.00	0.00	0.00	0.00	0.00
Engineering Hours :	0.00	0.00	0.00		
Engineering Cost :	0.00	0.00	0.00	0.00	0.00
Production Hours :	0.00	1.00	100.00		
Production Cost :	0.00	20.27	100.00	0.00	20.27
Packaging Hours :	0.00	0.00	0.00		
Packaging Cost :	0.00	0.00	0.00	0.00	0.00
OverHead Hours :	0.00	0.00	0.00		
OverHead Cost :	0.00	0.00	0.00	0.00	0.00
CNC Hours :	0.00	1.00	100.00		
CNC :	0.00	0.00	0.00	0.00	0.00
Misc. Hours :	0.00	0.00	0.00		
Misc. :	0.00	0.00	0.00	0.00	0.00
Burden :	0.00	0.00	0.00		
Total Cost :	0.00	20.27	100.00		
Margin :	0.000	0.000			
Selling Cost :	0.00	20.27			

	Estimated	Actual
Labour Hrs/Amount Done :	0.00	0.00
Profits/(Loss) :	0.00	( -20.27)

*WMS*  
*u*  
*11.13*

Date: Monday, 14/11/2005 8:52:49 AM  
 User: Alba Panzuto







## Process Sheet



<b>Customer</b>	: CU-DAR001 Dart Helicopters Services	<b>Drawing Name</b>	: TUBE ASSEMBLY
<b>Job Number</b>	: 23658		
<b>Estimate Number</b>	: 10429		
<b>P.O. Number</b>	:	<b>Part Number</b>	: D3304043
<b>This Issue</b>	: 14/11/2005	<b>S.O. No.</b>	:
<b>Prsht Rev.</b>	: NC	<b>Drawing Number</b>	: D3304 REV. B
<b>First Issue</b>	: / /	<b>Project Number</b>	:
<b>Previous Run</b>	:	<b>Drawing Revision</b>	: B
	<b>Type</b> : MACHINED PARTS	<b>Material</b>	:
<b>Written By</b>	:	<b>Due Date</b>	: 15/12/2005
<b>Checked &amp; Approved By</b>	:	<b>Qty:</b>	2 Um: Each
<b>Comment</b>	: Est: D 04.11.26 Revised Step 7 KJ/JLM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	M304TR0875W065	SS TUBING
2.0	HARDINGE	HARDINGE CNC LATHE SMALL
 		
<b>Comment:</b> HARDINGE CNC LATHE SMALL 1- Cut blank: 22.00" as per Dwg D3304 2- Turn as per Folio FA458 and Dwg D3304 3- Deburr		
3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
 		
<b>Comment:</b> INSPECT PARTS AS THEY COME OFF MACHINE		
4.0	QC8	SECOND CHECK
 		
<b>Comment:</b> SECOND CHECK		

5.0	SMALL FAB 1	SMALL & MEDIUM FAB RESOURCE 1
 		
<b>Comment:</b> SMALL & MEDIUM FAB RESOURCE 1 1- Form as per Dwg D3304 Ensure that bend radius does not fall into straight section using DT8756. 2- Drill as per Dwg D3304 using drill Jig D3304-T1 3- Cut tube to length as per Dwg D3304 4- Deburr		

6.0	QC5	INSPECT WORK TO CURRENT STEP
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**Comment:** INSPECT WORK TO CURRENT STEP

Date: Monday, 14/11/2005 8:52:49 AM  
User: Alba Panzuto

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 23658

Part Number: D3304043

Job Number:



Seq. #:

Machine Or Operation:

Description :

7.0

D33047

Bracket

8.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Weld bracket as per Dwg D3304 and QSI 004 using DT8775

9.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

10.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

12.0

BLBS0016

PIP PIN

13.0

CBL460

Loop Sleeve

14.0

CBL1240

Cable

15.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble lanyard and pip pin as per Dwg D3304

Identify as D3304-043

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

17.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock

Location: \_\_\_\_\_



Date: Monday, 14/11/2005 8:52:49 AM  
User: Alba Panzuto

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 23658

Part Number: D3304043

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL  
Inspection Level 21

Job Completion

